All Agency Project Request

2013 - 2015 Biennium

Agency	Institution	Building No.	Building Name
University of Wisconsin	Stevens Point	285-0K-0009	FINE ARTS CENTER

Project No. 15E1R **Project Title** Noel Fine Arts Jenkins Theater HVAC/Rigging Renv

Project Intent

This project provides investigation and research, pre-design, and design services to replace the theater air handling equipment and a stage rigging system to provide safe and dependable operations of both systems during performances, events, and rehearsals. The mechanical system and stage rigging will be evaluated to identify deficiencies, develop design solution alternatives, and recommend appropriate corrective measures. A structural analysis will be required to assure that all design solution alternatives provide the necessary support. Space heating and cooling load calculations will be conducted to determine the size of the new air handling unit as well as the new VAV terminals and associated distribution system.

Project Description

MECHANICAL SYSTEM: Project work includes replacement of the 30,000 CFM air handling unit and associated reheat coils serving the Jenkins Theatre, modification of the stage ductwork where conflicts exist with the stage rigging, and installation of new digital controls and variable air volume (VAVs) boxes. The new air handling unit and reheat coils will be installed and configured to provide safe maintenance staff access.

An acoustical consultant shall work with UW-Stevens Point to determine acoustical requirements for the space and evaluate the new HVAC system to ensure that the installed system meets the space requirements.

STAGE RIGGING: Project work also includes replacing the stage rigging equipment and lighting system network controller and upgrading the lighting system data network. This project will install new telecommunications data circuits to each motorized electric service; new winches, computer control software, and sheaves to integrate stage automation with stage rigging systems; new fall arrest equipment at the counterweight loading gallery; and new mid-house lighting catwalk and ladder access in both side stage air shafts.

Stage rigging equipment to be replaced includes a full height arbor guide system for 40 line sets and a floor level lock rail, 34 manual counterweight line sets over the stage area with 42-foot battens and adjustable extensions, two (2) motorized or motor assisted lines sets upstage to downstage in stage left and right wings used to hang tabs to mask wing space, four (4) motorized or motor assisted lines sets for stage lighting over the stage area with four (4) new 20-amp convenience electrical circuits not connected to the dimmer racks, three (3) traveler curtain tracks, one (1) motorized line set for stage lighting with four (4) 20-amp electrical circuits not connected to the dimmer racks over the forestage area to replace the dead hung pit pipe with a winch system of the same capacity as the stage area service, and one (1) motorized line set along the upstage wall to move the paint frame.

Project Justification

A leak has developed in the original (1969) air handling unit's cooling coil. The control valves are pneumatic and no longer function. The valves need to be manually operated to accommodate any temperature changes, they persistently leak, and they require separate asbestos abatement of the pipe insulation with each leak instance. Improved and safer maintenance staff access to the air handler is required to eliminate the series of limited and dangerous pathways which start at a spiral staircase, proceed across a catwalk, and through a half-height door located about 2-feet above the floor of the catwalk. Inside the mechanical room, access to the fans is through a small bottom hatch. To access the control valves, maintenance staff must maneuver within an extremely tight space. Access to the mechanical room is compounded because on almost every trip, tools or equipment must also be transported up the spiral stairs and across the catwalks. There is no suitable access point to remove the old air handler and associated equipment. A penetration will be needed in the outside wall to demo and remove the existing equipment and install the new equipment. Relocating ductwork ~20 feet off the stage floor is needed to allow a more effective rigging system design.

In October 2013, a rigging and safety inspection report was completed. General observations noted that the

counterweight system is a complex machine with many interrelated parts and when one portion is damaged, surrounding equipment is usually affected. The counterweight system is original to the building (1969) and there have been several modifications and additions/replacements of original equipment due to wear or accident. The dead hung line sets installed over the stage apron present an imminent hazard and must be removed. The electrical conduit in the path of the fire curtain arbor must be removed or the line set be taken out of commission. The stage light pipe systems are controlled by dimmer racks and the current lighting fixtures and accessories (i.e. color scrollers, moving mirrors, fog machines, and projectors) have different power requirements.

A/E Consultant Requirements

☑ A/E Selection Required?

Consultants should have specific expertise and experience in the design and coordination of theater HVAC air handling systems, theater acoustics, and stage rigging as part of a design team. Work includes site surveys, acquiring field data, verifying as-built conditions, and performing a structural analysis to assure accurate development of design and bidding documents and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

The consultant will verify project scope, schedule, and budget estimates, and recommend modifications as required to complete the specified project intent. The consultant will prepare a pre-design document to establish an appropriate project scope, budget, and schedule prior to the university seeking authority to construct from the Board of Regents and State Building Commission.

Commissioning

☑ Level 1

☐ Level 2

Project Budget

Construction Cost:		$
Haz Mats:		$
Construction Total:		$
Contingency:	15%	$
A/E Design Fees:	8%	$
DFD Mgmt Fees:	4%	$
Other:		$
		$2,542,000

Funding Source(s)

	Total
GFSB - Facilities Maintenance & Renovation [Z060]	$0
PRSB - []	$0
Agency/Institution Cash [AGF0]	$80,000
Gifts	$0
Grants	$0
Building Trust Funds [BTF]	$0
Other Funding Source	$0
	$80,000

Project Schedule

SBC Approval:	01/2016
A/E Selection:	06/2015
Bid Opening:	12/2016
Construction Start:	05/2017
Substantial Completion:	09/2017
Project Close Out:	12/2017

Project Contact

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Project Scope Consideration Checklist

	y	N
1. Will the building or area impacted by the project be occupied during construction? If yes, explain how the occupants will be accommodated during construction.	☑	☐

All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.

2.	Is the project an extension of another authorized project? If so, provide the project #...	☐	☑
3.	Are hazardous materials involved? If yes, what materials are involved and how will they be handled? *Required hazardous materials abatement has been included in the estimated project schedule and project budget.*	☑	☐
4.	Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent? *All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.*	☑	☐
5.	Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building? If yes, to what extent?	☐	☑
6.	Are other projects or work occurring within this project's work area? If yes, provide the project # and/or description of the other work in the project scope.	☐	☑
7.	Have you identified the WEPA designation of the project...Type I, Type II, or Type III? *Type III.*	☑	☐
8.	Is the facility listed on a historic register (federal or state), or is the facility listed by the Wisconsin Historical Society as a building of potential historic significance? If yes, describe here.	☐	☑
9.	Are there any other issues affecting the cost or status of this project?	☐	☑
10.	Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed solution. *Project work is seasonal. Preferred project work schedule should be limited to late spring, summer, and/or early fall months if possible.*	☑	☐
11.	Will the project improve, decrease, or increase the function and costs of facilities operational and maintenance budget and the work load? If yes, to what extent? *Completion of this project will decrease operational maintenance costs.*	☑	☐
12.	Are there known code or health and safety concerns? If yes, identify and indicate if the correction or compliance measure was included in the budget estimate, or indicate plans for correcting the issue(s). *This project improves safety for the maintenance of the HVAC system and operation of the rigging systems.*	☑	☐
13.	Are there potential energy or water usages reduction grants, rebates, or incentives for which the project may qualify (i.e. Focus on Energy <http://www.focusonenergy.com> or the local utility provider)? If yes, describe here.	☐	☑
14.	If this is an energy project, indicate and describe the simple payback on state funding sources in years and the expected energy reduction here.	☐	☑